Section 3
Industrial Component

3.0 Overview

The City of Carlsbad currently has over 1,000 industrial facilities operating within its jurisdiction. Major industry types in Carlsbad include high technology, multimedia and biomedical businesses, electronics, golf apparel and equipment manufacturers and several light industry parks. Industrial activities can often contribute to the degradation of receiving water quality when performed with disregard for the environment. The Permit requires the City of Carlsbad to develop and implement a program to reduce pollutant runoff from industrial sites within its jurisdiction. In order to comply with these requirements, the City of Carlsbad has developed a comprehensive program to reduce polluted urban runoff originating from existing industrial facilities.

This section discusses Permit requirements that apply to the Industrial Component of the Jurisdictional Urban Runoff Management Plan (JURMP) and meets or exceeds minimum requirements as specified in Section H of the Permit. The following subsections address storm water runoff issues from industrial facilities and what actions are planned by the City of Carlsbad to minimize those impacts on receiving water quality:

- Pollution Prevention (Section 3.1)
- Source Identification (Section 3.2)
- Threat to Water Quality Prioritization (Section 3.3)
- Best Management Practices Implementation (Section 3.4)
- Monitoring Program Description (Section 3.5)
- Inspections of Industries (Section 3.6)
- Enforcement of Industrial Sites (Section 3.7)
- Non-compliant Industrial Site Identification and SDRWQCB Notification Procedures (Section 3.8)

3.1 Pollution Prevention

3.1.2 Pollution Prevention Action Plan

<u>Action #1</u> - Develop a list of pollution prevention opportunities for industrial facilities.

There are four key components to a pollution prevention program and a fifth component added for storm water. Reviewing the following five "Rs" will assist in identifying the pollution prevention opportunities for Industrial Facilities. The definitions of these terms are as follows:

- Reduce – BEFORE generating a waste stream, minimize the quantity or toxicity of the waste by substituting nontoxic chemicals.
- Reuse – Material, unwanted in one area, may be used for its intended purpose in another area.
- Recycle – Reprocess used materials and produce a new or useful product.
- Rebuy – Purchase a product that contains recycled-content materials.
- Redirect – Divert the flow of storm water to reduce or eliminate contact with potential pollution. Direct storm water away from contact with known pollutants.

Pollution prevention eliminates or reduces the management of polluted storm water runoff. Industrial facilities often handle a variety of pollutants, both indoors and outdoors, that pose potential environmental threats if transported by way of urban runoff. Although the primary goal of pollution prevention is to protect human and environmental health, if properly implemented, pollution prevention can also support production by decreasing labor time associated with excess pollutant waste handling, thereby re-directing labor time more efficiently to production. Specific pollution prevention procedures may vary from one industrial facility to another, and the City will inform industries of pollution prevention opportunities during site inspections or through workshops aimed at common industry groups, where feasible. However, the following pollution prevention principles apply to most industries:

- Affirmative Procurement – Use alternative, safer, or recycled products.
- Redirect storm water flows away from areas of concern.
- Reduce use of water or use dry methods.
- Reduce storm water flow across facility site.
- Recycle and reuse waste products and waste flows.
- Move or cover potential pollution from storm water contact.
- Provide on-going employee training in pollution prevention.

<u>Action #2</u> – Encourage or require industrial facilities to develop Storm Water Pollution Prevention Plans (SWPPPs)

High priority industrial facilities operating under the statewide General Industrial Permit are required to maintain a SWPPP on site. All high priority facilities will be encouraged to develop and implement a SWPPP, and may be required to if the inspector determines it is necessary to protect water quality. Guidelines for developing a SWPPP are described in Section A of the General Industrial Permit (Water Quality Order No. 97-03-DWQ, *Water Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*) issued by SWRCB.

Low and medium priority facilities are not explicitly required to develop a SWPPP, according to the Permit. However, the City of Carlsbad storm water ordinance gives the inspector the authority to require a SWPPP for any industrial facility when necessary to protect water quality.

3.2 Source Identification

3.2.1 Purpose and Permit Requirements

Purpose

The purpose of this Permit requirement is to generate an inventory of Industrial Facilities to focus storm water quality efforts.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Industrial Component for Source Identification is as follows:

Section F.3.b.(2)
Each Copermittee shall develop and update annually a watershed-based inventory of all industrial sites within its jurisdiction regardless of site ownership. This requirement is applicable to all industrial sites regardless of whether the industrial site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Industrial Activities, Except Construction (hereinafter General Industrial Permit) or other individual NPDES permit.

The inventory shall include the following minimum information for each industrial site: name; address; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility. The use of automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

Jurisdictional URMP Requirements

The Permit requirement under the Industrial Component for Source Identification is as follows:

Section H.(3)(b)
A completed watershed-based inventory of all sites.

City Action Plan

1) Generate an electronic list using spreadsheet software and GIS map of industrial facilities by sub-watershed.
2) Annually update the list and map of industrial areas.

3.2.2 Source Identification Actions

Action #1 - Generate a list and GIS map of industrial facilities by sub-watershed.

D-Max Engineering, Inc. (D-Max) was contracted to identify the industrial facilities within the City of Carlsbad. To accomplish this, D-Max reviewed the following databases and industry listings to identify current industrial facilities in Carlsbad:

1. City of Carlsbad business license listing;
2. County of San Diego hazardous materials and waste listings;
3. California SWRCB list of Permittees covered under the General Industrial Permit; and
4. Encina Wastewater Authority list of industrial facilities with wastewater discharge permits.

Currently, 902 industrial facilities have been identified within the City of Carlsbad. An additional 100 facilities were found in the County of San Diego listing that did not have similar records with the City of Carlsbad. Fourteen industrial and commercial facilities were found in the Encina Wastewater Authority records that did not have similar records with the City or County. These additional facilities will require further review. The complete listing of identified industrial sites is found in Appendix C. The City of Carlsbad has generated a watershed-based map using GIS technology, and the industrial facilities identified by D-Max were entered into the GIS map. Figure 3-1 (below) provides the visual aid to indicate the location of each industrial facility by name and type of facility.

Figure 3-1

Characteristic or Criteria	**Definition**
Facility	Industrial Facilities as provided by D-Max Engineering, Inc. and identified by regional maps.
Location	Address from City of Carlsbad/Thomas Guide or nearest street used as locator in placing the Facility within a GIS framework.
Watershed	The hydrologic unit within the Carlsbad watershed.
Type of Industrial Activity	Narrative description including SIC Codes which best reflect the principal products or services provided by the facility.
Generated Wastes	As listed in Permit Order No. 2001-01, Finding #7, Pollutant Types: Suspended solids Sediment* Nutrients (nitrogen and phosphorus fertilizers)* Pathogens (bacteria*, viruses, protozoa) Heavy metals (copper, lead, zinc, and cadmium) Petroleum products/PAHs Pesticides, Herbicides, PCBs Oxygen-demanding substances (decaying vegetation, animal waste) Trash *303(d) water bodies listed pollutants

Priority ranking (High, Medium or Low)	Permit Order No. 2001-01, Section F.3.b.(3) lists the criteria to consider in evaluating threat to water quality and ranking industrial sites as high, medium or low threat.

<u>Action #2</u> - Annually update list and map of industrial sites.

The City plans to inspect industrial facilities at the frequencies specified in section 6 of this component. The inspections will provide current industrial information that will be used to annually update the list and map of high, medium and low priority industrial facilities. These changes will be identified in the Annual Report to the San Diego Regional Water Quality Control Board.

3.3 Threat to Water Quality Prioritization

3.3.1 Purpose and Permit Requirements

Purpose

The purpose of this Permit requirement is to prioritize importance of Industrial Sites in terms of impact to storm water.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirements under the Industrial Component for Threat to Water Quality Prioritization are as follows:

Section F.3.b.(3)(a)
To establish priorities for industrial oversight activities under this Order, the Copermittee shall prioritize each watershed-based inventory in F.3.b.2. above by threat to water quality and update annually. Each industrial site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) type of industrial activity (SIC Code); (2) materials used in industrial processes; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; and (9) whether the industrial site is subject to the statewide General Industrial Permit; and (10) any other relevant factors.

Section F.3.b.(3)(b)
At a minimum, the high priority industrial sites shall include industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); industrial facilities tributary to a Clean Water Act section 303(d) impaired water body, where a facility generates pollutants for which the water body is impaired; industrial facilities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vii of this order); facilities subject to the statewide General Industrial Permit; and all other industrial facilities that the Copermittee determines are contributing significant pollutant loading to its MS4, regardless of whether such facilities are covered under the statewide General Industrial Permit or other NPDES permit.

Jurisdictional URMP Requirements

The Permit requirements under the Industrial Component for Threat to Water Quality Prioritization are as follows:

Section H.(3)(c)
A completed prioritization of all industrial sites based on threat to water quality.

City Action Plan

1) Use the criteria listed in Permit Section F.3.a.(3) to categorize the list of industrial sites into rankings of high, medium and low priority.

3.3.2 Threat to Water Quality Prioritization Actions

<u>Action #1</u> – Use the criteria listed in Permit Section F.3.a.(3) to categorize the list of industrial sites into rankings of high, medium and low priority.

In addition to identifying the industrial sources in the City of Carlsbad outlined in subsection 3.2 of this component, D-Max Engineering also prioritized these facilities as High, Medium, or Low threat to water quality based on the criteria in section F.3.a.(3) of the Permit.

Potential threats to water quality at each industrial facility were determined by evaluating a variety of site-specific factors according to the criteria outlined below. Using this method, the inventory of industrial facilities was prioritized into 164 high threat, 264 medium threat, and 474 low threat sites as shown in Appendix C, Tables 3-1, 3-3, and 3-5, respectively. Those facilities in which discrepancies exist between City of Carlsbad and County of San Diego records have also been prioritized into 24 high threat, 54 medium threat, and 22 low threat sites as shown in Appendix C, Tables 3-2, 3-4, and 3-6, respectively. Prioritizations will be updated annually in conjunction with the watershed-based inventory to reflect any changes in industrial use.

- **Prioritization Criteria**: Prioritization involves two steps: (1) initially classifying a facility as being a high, medium, or low priority threat based on site information; and (2) subsequently confirming or reclassifying the facility based on field observations and additional information. The former step has been accomplished administratively using the data provided in the inventory of industrial sites. The latter step will be completed following the initial inspection of each industrial facility. The permit defines four minimum criteria for initially identifying high priority industrial facilities. All industrial facilities that fit any one or more of the following criteria were considered high priority threats to water quality:

    a. Facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

    b. Facilities which are tributary to a Clean Water Act Section 303(d) impaired water body, where the facility generates pollutants for which the water body is impaired; within or directly adjacent to (i.e. within 200 feet) or discharging directly to a coastal lagoon or other receiving water within an Environmentally Sensitive Area (ESA).

    c. Facilities subject to the statewide General Industrial Permit.

    d. All other facilities that the City of Carlsbad determines are contributing significant pollutant loading to its MS4, regardless of whether such facilities are covered under the statewide General Industrial Permit or other NPDES permits.

In addition of the minimum criteria listed above, the City also considered the following site attributes to evaluate the potential threat to water quality:

- Type of activity (SIC code)
- Materials used in the industrial process
- Types and quantities of waste generated
- Potential to discharge pollutants
- Authorized non-storm water discharges
- Size of the facility
- Proximity to a receiving water body
- Sensitivity of the nearby receiving water body
- Facilities subject to the State General Industrial Permit

- Any other relevant factors

Initial prioritization involved using a flow chart (Figure 3-2) as a supplemental tool in evaluating the above criteria; each facility was then classified as high, medium, or low threat to water quality. The results obtained from the flow chart were reviewed to consider all relevant factors that may affect the water quality threat. Individual prioritization criteria are described below in further detail:

- **Type of Activity (SIC code)**. Standard Industrial Classification (SIC) codes were used extensively in the prioritization process to identify the specific industrial activities occurring at each facility. The NPDES General Industrial Permit defines specific SIC codes such that (1) coverage under the General Permit is mandatory (as defined in Categories ii, iii, vi, and viii of the General Industrial Permit) or (2) coverage under the General Permit is conditional, required only if material, machinery, or products are exposed to storm water (as defined in Category 10 of the General Permit). Industries not listed with an SIC code were contacted and assigned an appropriate code.
- **Materials used in the industrial processes**. Hazardous materials used in industrial processes can contribute significant pollutant loads to receiving waters if transported by storm water. A listing of all industrial facilities using or storing hazardous materials within the City of Carlsbad was obtained from the County of San Diego.
- **Types and quantities of waste generated, stored or handled**. If not properly disposed of, industrial wastes can significantly degrade receiving waters when transported by storm water. A listing of all facilities generating industrial wastes within the City of Carlsbad was obtained from the County of San Diego. Industrial Waste Permits issued by Encina Wastewater Authority were also examined. The list is presented in Table 3-9 and includes 31 industrial and commercial facilities with Pretreatment Permits. Twenty-two industrial facilities were identified with these permits and were classified as high priority.
- **Potential to discharge pollutants**. Potential to discharge pollutants evaluates all material handling equipment or activities, raw materials, intermediate products, final products, waste material, by-products, or industrial machinery exposed to storm water. Discharge potential will be assessed during site inspections at each facility.
- **Authorized non-storm water discharges**. Authorized non-storm water discharges can contribute to water quality degradation by transporting pollutants into receiving waters. Non-storm water discharges will be evaluated to determine whether they are a significant source of pollutants and whether the discharges may continue to be exempted from the prohibitions of Section B.1 of the Permit.
- **Size of the facility**. Size of the facility affects the amount of runoff and pollutant loads generated from the industry.
- **Proximity and sensitivity of receiving water bodies**. The potential for pollutant transport to sensitive receiving water bodies was evaluated by determining the proximity and sensitivity of receiving water bodies. Using the definitions from section F.1.b.(2)(a)vii of the Permit, it was determined that City of Carlsbad contains the following environmentally sensitive areas (ESAs):
    - Buena Vista Lagoon (RARE Beneficial Use, 303(d) impaired)
    - Buena Vista Creek (RARE Beneficial Use)
    - Agua Hedionda Lagoon (RARE Beneficial Use, 303(d) impaired)

- Agua Hedionda Creek (proposed 303(d) for 2002)
- Multiple Habitat Conservation Program Biological Core and Linkage Areas
- Sensitive Vegetation Buffers as determined by the CityofCarlsbad

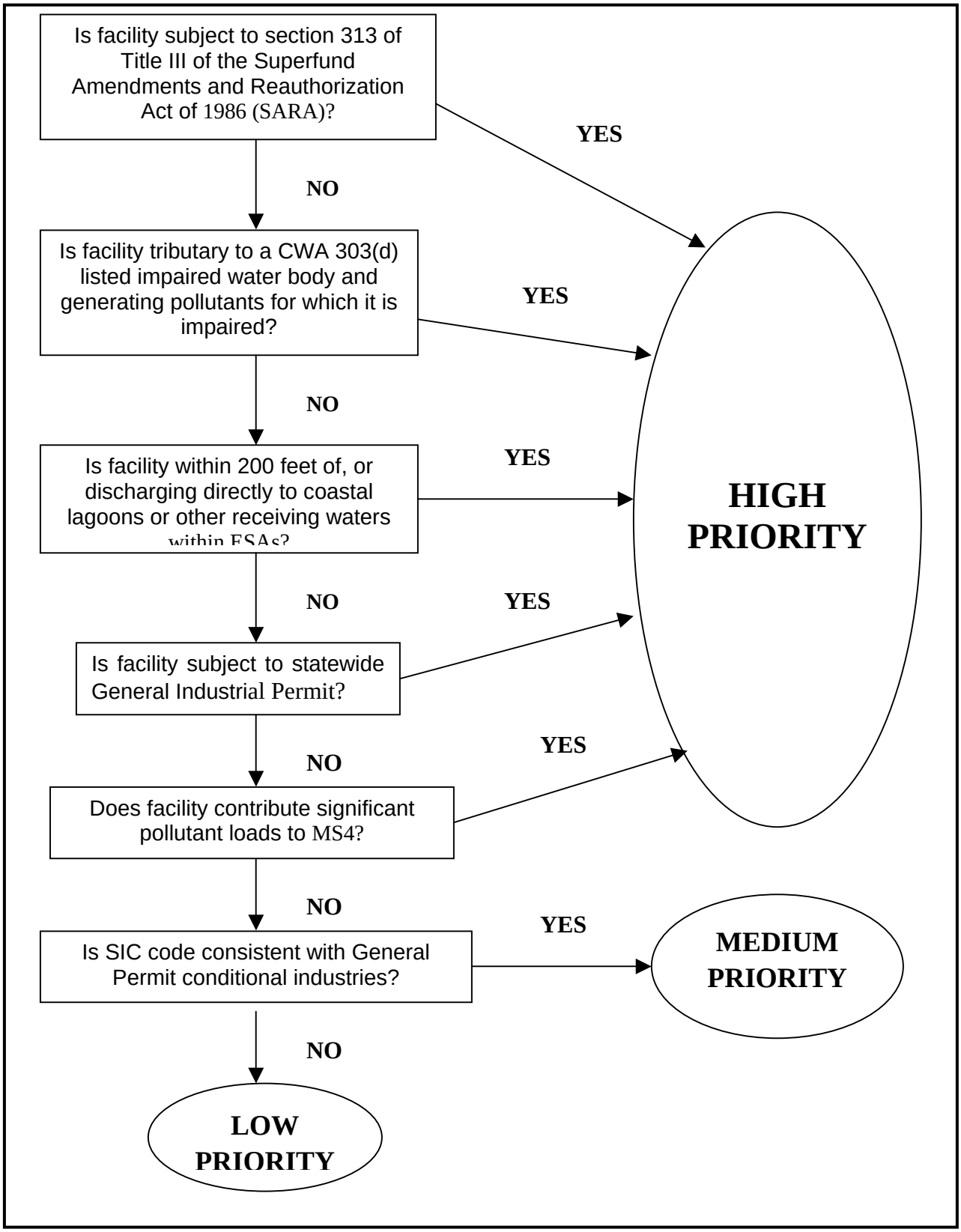
All facilities directly discharging to or within 200 feet of the ESAs listed above were considered high priority.

- **Facilities subject to the State General Industrial Permit**. In accordance with the Permit, all industrial facilities subject to the General Industrial Permit were classified as high priority threats to water quality. A listing of facilities located in Carlsbad that have currently filed a Notice of Intent (NOI) to be covered under the General Industrial Permit was obtained from the California Department of Water Resources. Facilities that have filed a NOI to obtain coverage under the General Permit are presented in Appendix C, Table 3-7; facilities requiring coverage according to their reported SIC codes that have not filed a NOI are listed in Appendix C, Table 3-8.
- **Any other relevant factors**. The City reserves the authority to consider any other relevant factors specific to the facility to utilize in the prioritization process.

High priority facilities were generally determined using the guidelines defined in the Permit. Medium priority facilities included all industries that have not filed a NOI and do not meet other high priority criteria, but are conditionally subject to General Permit if any materials, machinery, or products are exposed to storm water (as defined in Category 10 of the General industrial permit). Low priority facilities were determined to pose very low threat to water quality.

After initial prioritization, the City will perform facility inspections; subsequently, each site will be reevaluated to determine whether the initial prioritization was adequate. Facilities possessing a No Exposure Certification (NEC) may be eligible for a lesser priority classification.

Figure 3-2 Initial Prioritization Flow Chart



3.4 Best Management Practices Implementation

3.4.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to identify the BMPs best suited for each priority category defined in Section 3.3 of this JURMP and how these BMPs will be implemented.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirements under the Industrial Component Best Management Practices Implemented are as follows:

Section F.3.b.(4)(a)
Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality industrial sites (as determined under section F.3.b.(3)). The designated minimum BMPs for high threat to water quality industrial sites shall be industry and site specific as appropriate.

Section F.3.b.(4)(b)
Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the sites threat to water quality rating) at each industrial site within its jurisdiction. If particular minimum BMPs are infeasible at any specific site, each Copermittee shall implement, or require implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPS as necessary to comply with this Order including BMP's which are more stringent than those required under the statewide General Industrial Permit.

Section F.3.b.(4)(c)
Each Copermittee shall implement, or require implementation of, additional controls for industrial sites tributary to Clean Water Act section 303(d) impaired water bodies (where a site generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for industrial sites within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

Jurisdictional URMP Requirements

The Permit requirements under the Industrial Component for Source Identification and Threat to Water Quality Prioritization are as follows:

Section H.(3)(d)
Which BMPs will be implemented, or required to be implemented, for each priority category.

Section H.(3)(e)
How BMPs will be implemented, or required to be implemented, for each priority category.

City Action Plan

1) Develop a list of BMPs for industries.
2) Specify how BMPs will be implemented for each industrial priority category.

3.4.2 Best Management Practices Implementation Actions

<u>Action #1</u> - Develop a list of BMPs for each industrial priority category.

BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. In general, BMPs can be categorized as non-structural and structural. Non-structural BMPs consist of procedures and practices that prevent industrial pollutants from entering storm water. Because of their low cost and simplicity, non-structural BMPs should be considered first in the development of a facility's BMP program. Described below are minimum BMPs to be implemented by industries as applicable to their facility. Many of these methods already exist as part of the standard operating procedures for a site:

1. Good housekeeping
   Good housekeeping practices are designed to maintain a clean and orderly work environment. An orderly work environment may reduce the possibility of accidental spills caused by mishandling of chemicals or equipment and may reduce safety hazards to facility personnel. A clean work environment minimizes the discharge of pollutants into the storm water system.

2. Preventive maintenance
   Preventive maintenance includes the regular inspection and maintenance of storm water structures (drains, catch basins, etc.) as well as other facility equipment and systems. Structures should be maintained in good working order and cleaned as needed to prevent discharge of pollutants into the storm water system. Facility equipment or systems should be properly maintained to prevent leaks or discharges of pollutants into the storm water system.

3. Material Storage and Handling
   This includes all procedures to minimize exposure of significant materials to storm water and to minimize the potential for spills and leaks from storage, loading, unloading and transfer of materials.

4. Employee training
   Appropriate personnel should be trained in good housekeeping, preventive maintenance, materials storage and handling, solid waste handling and recycling, and spill response as applicable to the facility. Records should be retained of employees attending storm water training sessions and the topics covered.

5. Solid waste (non-hazardous) handling and recycling
   This includes the procedures or processes to handle, store, or dispose of waste or recyclable materials. Waste disposal areas should be kept free of litter and debris and waste and recyclable receptacles must have a cover or lid to prevent the contents from being dispersed by the wind or coming in contact with storm water.

6. Spill response
   Spills and leaks can be a major contributor to storm water pollution. Facilities should identify potential locations and quantities of significant materials that may spill or leak, and should write and implement a response plan addressing spill containment, clean up and notification procedures. Appropriate spill clean-up equipment should be readily accessible to trained spill response personnel.

7. Record keeping

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel. Record keeping and internal reporting represent good operating practices as they increase the efficiency of the facility and the effectiveness of BMPs.

8. Self inspection/quality assurance
   This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures should be described to ensure adequate corrective actions are taken. Quality assurance includes the procedures to ensure that all elements of any required SWPPPs or monitoring plans are adequately conducted.

The City may develop business or activity specific BMP booklets or guidance, if the grouping approach provides the most effective and efficient means of informing and educating a particular industry type. As part of the inspection program, the City will analyze the feasibility of grouping industries for the purpose of developing industry specific BMP information; this effort will also be reviewed at the Watershed level with other cities in the North County to identify additional opportunities not available at the local level.

Structural BMPs consist of specialized equipment, structural components, or engineered technologies that can be used when non-structural BMPs are ineffective. Because structural BMPs are site specific, the facility operator needs to evaluate each proposed use. Proper installation and regular maintenance of structural BMPs are imperative to their effectiveness. Examples are as follows:

1. Overhead Coverage
   This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water.

2. Retention Ponds
   This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the facility.

3. Control Devices
   This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. Secondary Containment Structures
   This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

5. Treatment
   This includes inlet controls, infiltration devices, oil-water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges.

Since 1995, the City has required new industrial developments to implement structural BMPs for storm water runoff (e.g., drainage inlet filters/screens, sedimentation basins). The City will be inspecting High, Medium, and Low priority industries at the frequencies specified in section 3.6. During inspections, the City will observe and review the industry's current BMPs and will recommend or require BMPs as appropriate to mitigate the pollution generated from the specific activity. Inspections of industries with existing structural

BMPs will verify installation of the planned BMPs, maintenance and operation. Since these BMPs are site specific, the determination or recommendation for specific BMPs will be made after any inspections. When specific BMPs need to be designated, the City will refer to existing sources of published BMPs, including: the California Storm Water Best Management Handbooks (1993); County of San Diego Guidance Documents; CALTRANS, etc. BMP sources are listed in Section 15.

Action #2 - Specify how BMPs will be implemented for each industrial priority category.

The City is planning to distribute general BMP brochures to industries, starting with high priority. This information will be mailed or delivered in person during inspections. The City will also consider targeted education using workshops and group meetings. These may be conducted at the jurisdictional, watershed or regional levels.

Industry representatives are given specific BMP information during site visits and inspections. The inspection program is described in section 3.6, and an inspection form follows this section. The form shows how the inspector will review all potential areas of activity at the facility, assess BMP needs, and take photos if desired. In some cases, industries may be required to develop a SWPPP with specific BMPs that address the particular storm water issues identified during the inspection. Industry employees must be trained to know the requirements of the SWPPP or the BMPs for the activities at each facility. The inspector reviews SWPPPs and training records to verify that training is conducted as required. The inspection information is compiled into a photo report that details observations during the inspection and any corrective actions needed to prevent storm water pollution. This report is mailed with a cover letter to the industry including a date to comply with the corrective actions. Copies of inspection reports and letters for high priority industries are now being sent to the Industrial Compliance Unit of the SDRWQCB at their request.

When corrective actions are required, the inspector will conduct a follow-up visit to ensure compliance with the corrective actions and implementation of the BMPs. The City of Carlsbad Storm Water ordinance gives the inspector the authority to require implementation of Best Management Practices of industries when necessary to protect water quality. Non-compliance may result in escalated enforcement actions as outlined in section 3.7 of this JURMP.

3.5 Industrial Monitoring Program

3.5.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to monitor runoff from each high threat industrial site during storm events. This data can be used to identify problem sites that may need to implement additional BMPs.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Industrial Monitoring Program is as follows:

Section F.3.b.(5)(a)
Each Copermittee shall conduct, or require industry to conduct, a monitoring program for runoff from each high threat to water quality industrial site (identified in F.3.b.(3) above). Group monitoring by multiple industrial sites conducted under group monitoring programs approved by the State Water Resources Control Board is acceptable.

Section F.3.b.(5)(b)
At a minimum, the monitoring program shall provide quantitative data from two storm events per year on the following constituents:

- *i. Any pollutant listed in effluent guidelines subcategories where applicable;*
- *ii. Any pollutant for which an effluent limit has been established in an existing NPDES permit for the facility;*
- *iii. Oil and grease or Total Organic Carbon (TOC);*
- *iv. pH;*
- *v. Total suspended solids (TSS);*
- *vi. Specific conductance; and*
- *vii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges.*

Jurisdictional URMP Requirements

The Permit requirement under the Industrial Component for Monitoring is as follows:

Section H.(3)(f)
A description of the monitoring program to be conducted, or required to be conducted.

City Action Plan

1) Describe the Industrial monitoring program.

3.5.2 Industrial Monitoring Program Actions

<u>Action #1</u> – Describe the industrial monitoring program.

Each high priority industrial site will be required to conduct a runoff monitoring program. All industries covered under the State General Industrial Permit (NPDES General Permit No. CAS000001, Discharges of Storm Water Associated with Industrial Activity) must monitor according to the requirements of the General Permit. These industries may conduct the monitoring program individually or as part of a Group Monitoring Program approved by the State Water Resources Control Board. The City will require other high priority industries not covered under the General Industrial Permit to conduct monitoring as required in Order 2001-01 section F.3.b.(5). This includes sampling at least two storm events per year and analyzing for the constituents specified in F.3.b.(5)(b).

The monitoring program will be phased in as the City inspects the high priority industries. The inspection will determine an industry's monitoring requirements by verifying high priority status and if they are covered under the General Permit.

The City may conduct additional runoff monitoring at an industrial facility in order to verify compliance with the ordinance, permits or to determine if BMPs are being effectively implemented.

3.6 Inspection of Industrial Sites

3.6.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to develop an inspection protocol for industrial sites.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Industrial Component for Inspections of Industrial Sites is as follows:

Section F.3.b.(6)(a)
Each Copermittee shall conduct industrial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include review of BMP implementation plans.

Section F.3.b.(6)(b)
Each Copermittee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.3.b.(3) above. Each Copermittee shall inspect high priority industrial sites, at a minimum:

i. Annually, OR

ii. Bi-annually for any site that the responsible Copermittee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SCRWQCB at any time for one or more sites):

- *Copermittee has record of industrial site's Waste Discharge Identification Number (WDID#) documenting industrial site's coverage under the statewide General Industrial Permit; and*
- *Copermittee has reviewed the industrial site's Storm Water Pollution Prevention Plan (SWPPP); and*
- *Copermittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and*
- *Copermittee finds that the SWPPP is being properly implemented on site.*

Each copermittee shall inspect medium and low threat to water quality industrial sites as needed.

Section F.3.b.(6)(c)
Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

Section F.3.b.(6)(d)
To the extent that the SDRWQCB has conducted an inspection of a high priority industrial site during a particular year, the requirement for the responsible Copermittee to inspect this site during the same year will be satisfied.

Jurisdictional

The Permit requirements under the Industrial Component for Inspections of Industrial Sites are as follows:

URMP Requirements

Section H.(3)(g)
*Planned inspection frequencies for each priority category***.**

Section H.(3)(h)
Methods for inspection

City Action Plan

1) Establish inspection frequencies for priority categories.
2) Describe methods for industrial inspections.

3.6.2 Inspection of Industrial Sites Action Plan

<u>Action #1</u> – Determine inspection frequencies for these facilities.

Permit section F.3.b.(6) requires the City of Carlsbad to inspect industrial facilities within its jurisdiction. An inspection includes, but is not limited to, a review of BMP implementation plans and an assessment of their effectiveness. The inspection results will also provide additional information for updating the watershed-based inventory database required by Permit section F.3.b.(2).

1) **Inspection Frequency for High Priority Facilities**
   The Permit provides Copermittees with the option of inspecting a high-priority facility either once a year or once every two years. A Copermittee may choose to inspect a site every 2 years if the following set of conditions is met:

   The Copermittee (a) has a record of the site's Waste Discharge Identification Number; (b) has reviewed, approved, and confirmed proper implementation of the site's Storm Water Pollution Prevention Plan (SWPPP); *and* (c) has submitted a certified statement to the SDRWQCB verifying that the site has complied with these requirements.

   In addition, a Copermittee may determine that the inspection requirement is met if the SDRWQCB already has conducted an inspection, pursuant to the statewide General Industrial Permit, of a site for the year in question.

   The City of Carlsbad plans to conduct inspections of High Priority facilities once per year. More frequent inspections or follow-up may be required for sites found to be out of compliance or placed on a time schedule to comply.

2) **Inspection frequency for Low and Medium Priority Facilities**
   The City of Carlsbad plans to conduct inspections of medium priority industries once every two years and low priority facilities once every three years, as resources are available.

3) **Complaint investigation**s
   The City will investigate all complaints of illegal discharges from an industrial site made by the public or another agency or those arising from the results of dry-weather field screening and analytical monitoring program. Investigations will be performed according to the procedures described in Component 8 of this JURMP

<u>Action #2</u> –Develop an inspection procedure for these industrial facilities.

1) **Goal**. The City will inspect an industrial site to determine if the facilities and operations are in compliance with the Permit and local ordinance, and to review the BMP implementation plans and assess their effectiveness. To accomplish this goal, the City may provide educational materials and technical or regulatory updates, review SWPPPs, provide feedback about BMPs appropriate for a given activity, and identify any illicit discharges and connections to the MS4.

2) **Types of Inspections**.

a. **Advisory inspections.** The City plans to conduct advisory inspections for most first time industrial inspections, and to follow these up with compliance inspections. Advisory inspections will be announced inspections so that the inspector can meet with responsible facility official(s) (e.g., owner, superintendent, compliance manager, engineering consultant) in order to provide more efficient communication of the storm water requirements and inspection goals. An advisory inspection will focus on current facility operations, BMPs in use, and the effectiveness of those BMPs.

b. **Compliance Inspections.** A Compliance Inspection will cover the same information as an advisory inspection, but will typically be unannounced in order to verify compliance and that BMPs are being effectively implemented.

c. **General Procedures.** For conducting inspections, the City may use the Alameda Countywide Clean Water Program's *California Industrial/Commercial Stormwater Inspection Program Handbook, March 1996*, the U.S. EPA (1994) *Industrial User Inspection and Sampling Manual for POTW's*, or other City of Carlsbad Storm Water Protection Program procedures.

3) **Pre-inspection Preparation.**

a. **Purpose.** The inspector needs to establish the purpose and scope of the inspection and to review all pertinent background information. For an advisory inspection, the inspector will contact the industry officials to schedule the inspection. The inspector may also request that relevant documents be available for on-site review (e.g., SWPPP, site plans, spill response plan, etc).

b. **File review.** The inspector will review any existing City files or information for the industry, which may include past complaints, permits, monitoring data or submitted SWPPPs.

c. **Database review.** The inspector will also review the inventory database to identify the SIC code and determine what type of industrial activity and pollutants may be expected. The inventory database will indicate if the facility has or should have filed a Notice of Intent (NOI) to operate under the statewide General Industrial Permit. The database will also identify the hydrologic unit and proximity to Clean Water Act (CWA) 303(d) water bodies or environmentally sensitive areas (ESAs).

4) Approach to the Site

Observations. Before entering the facility grounds, the inspector should make note of the following:

a. Nearby conveyances or water bodies;
b. Visible discharge points along the perimeter of the site;
c. Outdoor areas of intensive industrial activity; and
d. Signs of recent additions or remodels.

5) **Entry and Opening Conference**

a. **General procedures.** The inspector will present proper credentials and will request to meet with the appropriate industry officials to discuss the inspection scope and objectives.

b. **Denial.** If the inspector is denied entry into the facility, the inspector will withdraw from the premises and contact the Environmental Programs Manager to determine if court action should be sought to obtain entry.

c. **Opening Conference**. After authorized entry, the inspector will further discuss the inspection scope and objectives. The inspector should attempt to verify and update the City's inventory information, such as:

i. Changes in ownership or operations;
ii. Clarification of observations noted before entering the facility, (any changes in activities, materials, or physical structures should be reflected in the SWPPP); and
iii. Review of the SWPPP, which can include these elements:
    1. Site map;
    2. List of industrial activities, types of pollutants, and existing non-structural and structural BMPs to reduce these pollutants in storm water discharge;
    3. Pollution prevention methods;
    4. Description of type and location of non-storm water discharges, both authorized and unauthorized; and
    5. Inventory of materials, including storage and loading/unloading areas.
iv. Review of any existing storm water monitoring data.

6) Facility Inspection

a. **Outdoor walk through.** The inspector and responsible industry official(s) should walk through all outdoor areas and observe activities, wherever it is safe to do so. Typical areas of activity that might impact storm water quality include:

i. Wash and rinsing areas;
ii. Process/manufacturing areas;
iii. Material storage areas;
iv. Loading, unloading and transfer areas;
v. Waste storage/disposal areas;
vi. Vehicle and heavy equipment storage and maintenance areas;
vii. Parking areas and access roads; and
viii. Rooftop equipment areas.

The inspector should attempt to gain a clear understanding of how runoff leaves the site by observing all portions of the storm water conveyance system and site grading, where possible and safe. This includes inlets, open channels, ditches, etc.

The inspector will document the observed conditions, including any BMPs being implemented, and will assess the facility's impact on storm water quality from the outdoor activities. Impact includes the facility's *potential* to discharge and the facility's *actual* discharge, which are further described below.

b. **Indoor walk through.** Review indoor activities and areas to ensure that pollutants are not spilled, dumped, or allowed to flow outdoors. The inspector will document the observed conditions, including any BMPs being implemented, and will assess the facility's impact on storm water quality from the indoor activities.

c. **Assess impact on storm water quality.** The inspector should attempt to determine the facility's impact on storm water quality at two levels: the facility's potential to discharge and the facility's actual discharge. The difference between potential and actual is determined by whether BMPs are effectively applied. For example, a facility that stores all of its machinery and heavy equipment outdoors has a high potential to impact storm drains from any oil and grease that might be exposed to runoff. However, if the equipment is well maintained and always covered by a tarp when not in use, the level of pollutant exposure is minimized and the actual impact of the facility is small. The inspector should note three things on the inspection report.

   i. What is the facility's potential to impact storm water quality from pollutant exposure and non-storm water discharges? Identify areas or activities that require BMPs to be applied to reduce or eliminate potential pollutant discharges to storm drains. If BMPs are in place, determine what the impact would be if BMPs failed or were no longer applied.

   ii. Are BMPs effectively applied so that pollutant exposure is minimized and non-storm water discharges are eliminated? For each of the facility's areas of activity, observe whether BMPs are in place and effective. The inspector may encounter situations where BMPs are in place but are not effectively applied. For example, an outdoor drum storage area might be bermed but the berm leaks or is already full of rainwater so that a spill would overflow the contained area. The inspector will use best professional judgment on the imminent impact of the facility and decide how much time to allow the owner/operator to correct the problem.

   iii. What type(s) of impact does or could the facility have on storm water quality? Clearly describe on the inspection report whether the impact is from: 1) pollutant exposure to runoff; and/or 2) non-storm water intentionally or accidentally discharged to the storm drains (e.g., illicit connections, process wastewater, spills, illegal dumping, etc.).

d. Document inspection activities. As the inspector observes the outdoor and indoor activities at the facility, he or she should take notes and photos as appropriate. The inspector should document the locations and types of BMPs that are currently being implemented, and also assess areas where BMPs still need to be implemented. The City will be developing an inspection form to assist the inspector with collecting general information, documenting observations, reviewing SWPPPs, assessing BMPs, and requiring corrective actions for violations. The inspector may also collect samples of illicit discharges or storm water from the facility as appropriate.

e. Closing Conference. After the walk-through of the facility, the inspector should collect any missing or additional information, including verifying the SIC codes. The inspector may review other documentation to look for indications of discharge problems, such as monitoring data, the Hazardous Materials Release Response Plan and Inventory, permits, manifests, logs

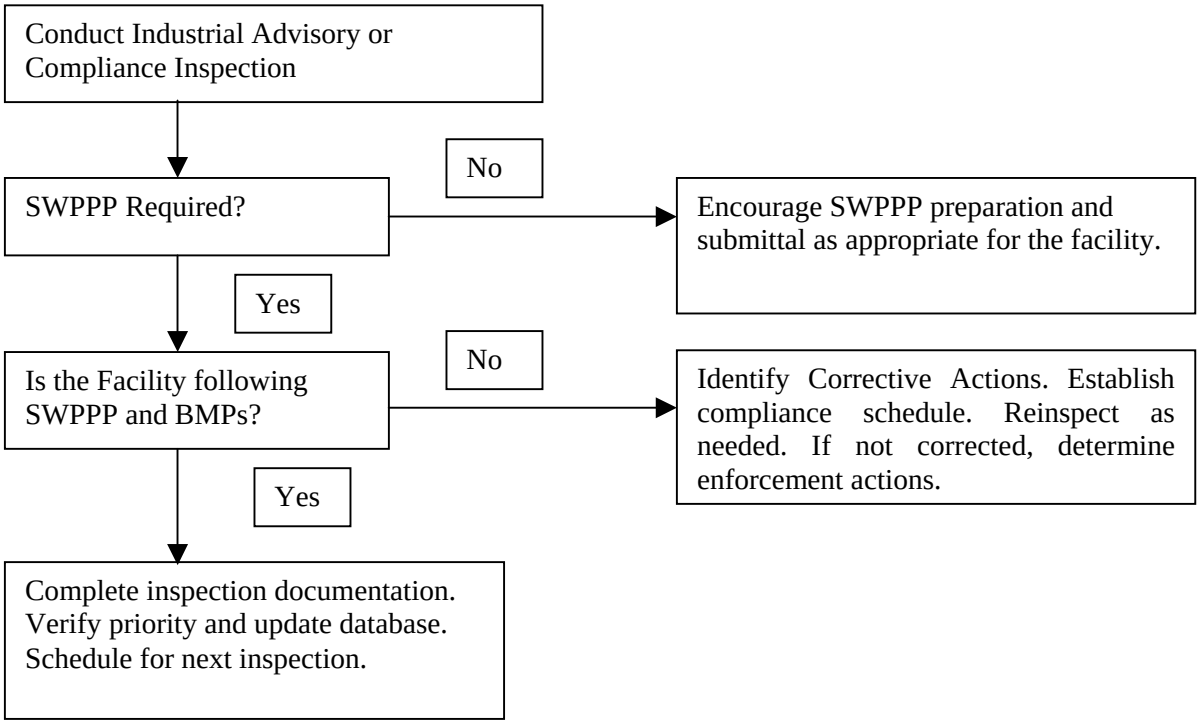
or other records required of the facility by local, state or federal laws in order to conduct operations or business on the premises. The inspector should review the inspection findings and inform the facility officials of follow-up procedures.

7) **Inspection report and follow-up.** The inspector will update the inventory and complete the inspection report upon return to the office. The inspection report should contain at least the following sections:
   a. General information to update the inventory;
   b. Review of the SWPPP;
   c. Assessment of BMP implementation;
   d. Documentation of violations and time frame for correction; and
   e. Signature and confirmation.

   Follow-up inspections will be done as needed to confirm BMP implementation and compliance. Section 3.7 of this component provides more detailed guidelines concerning enforcement actions.

   The inspector may make referrals to appropriate agencies, such as notifying the SDRWQCB of NOI non-filers or to report to the SDRWQCB incidents of non-compliance that present a threat to human or environmental health, as specified in Permit section 3.8 of this component.

Inspection procedure flow chart



3.7 Enforcement of Industrial Sites

3.7.1 Purpose and Permit Requirements

Purpose

The purpose of this section of the Industrial Component is to define the enforcement actions associated with noncompliance of the Permit, City Ordinance, or JURMP requirements.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Industrial Component for Enforcement of Industrial Sites is as follows:

Section F.3.b.(7)
Each Copermittee shall enforce its storm water ordinance at all industrial sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

Jurisdictional URMP Requirements

The Permit requirement under the Industrial Component for Enforcement of Industrial Sites is as follows:

Section H.(3)(i)
A description of enforcement mechanisms and how they will be used.

City Action Plan

1) Generate a list of enforcement mechanisms.
2) Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

3.7.2 Enforcement of Industrial Sites Action Plan

<u>Action #1</u> - Generate a list of enforcement mechanisms.

City inspectors and staff members with enforcement authority will issue enforcement actions to industrial facility owners and operators determined to be out of compliance with the Carlsbad Municipal Code, storm water pollution prevention plan or BMP requirements specified by the City. The inspectors, in accordance with the City's existing procedures, will document each observed violation. Depending on the severity of the violation, enforcement actions can range from a verbal warning to civil or criminal court actions with monetary fines. The inspectors will have flexibility to establish appropriate compliance time frames and to escalate enforcement on a case-by-case basis as needed to ensure compliance.

*If a significant and/or immediate threat to water quality is observed by a City of Carlsbad inspector, action should be taken to require the facility owner and/or operator to immediately cease the discharg*e. The enforcement mechanisms available to inspectors are as follows:

(a) Verbal and/or written warnings;
(b) Notice of Violation;
(c) Compliance schedule;
(d) Cease and Desist Orders or Stop Work Orders;
(e) Notice to Clean, Test and/or Abate;
(f) Suspension, revocation, or denial of permits or license;
(g) Administrative penalties and fines;
(h) Declaration of a Public Nuisance; and,
(i) Civil and/or criminal court actions.

While these measures typically escalate in enforcement action, they are not required to be issued in the exact order presented here. City inspectors will apply or recommend any of the enforcement steps as appropriate according their best professional judgment and the guidelines of the Enforcement Response Plan. A discussion of these measures is provided below.

1. <u>Verbal and/or written Warnings</u>

A common initial method of requesting corrective action and obtaining compliance is a verbal or written warning to the facility official. Verbal warnings from the inspector are often sufficient to achieve correction of the violation, often while the inspector is present at the facility. After notifying the facility official of the violation, the inspector should document the violation and notification in the inspection file, and note any time frames given for correcting the problem or follow-up inspections needed. In judging the degree of severity, the City of Carlsbad inspector may also take into account any history of similar or repeated violations at the facility.

2. <u>Notice of Violation</u>

A written Notice of Violation is used when verbal or written warnings are not deemed sufficient to correct the violation or additional documentation is warranted. The written Notice of Violation describes the infraction that is to be corrected and the required response or time frame(s) for correction. The notice is issued to the responsible party, and a copy is placed in the active inspection file. If the violation is corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

3. <u>Compliance Schedules</u>

A compliance schedule may be issued to ensure that multiple violations or more complex violations requiring capital expenditures or improvements are corrected by specified deadlines.

4. Cease and Desist Orders or Stop Work Orders

A City inspector may issue an order to cease and desist a discharge, practice, or operation that is occurring or is likely to take place in violation of the City ordinance. The inspector may direct the responsible party to take appropriate remedial or preventive action to prevent the violation from recurring. Whenever any work is being done contrary to the provisions of the City ordinance, the City inspector may issue a written order that the work be stopped until further notice.

5. Notice to Clean, Test and/or Abate

If the enforcement official finds any sediment, waste or pollutants on the sidewalk or a parcel of land that has potential to enter the City's storm water conveyance system in violation of the City ordinance, the inspector may issue a written notice to remove the material in a reasonable manner.

6. Suspension, Revocation, or Denial of Permits or Licenses

Violations of the City ordinance may be grounds for local permit or license denial, suspension, or revocation.

7. Administrative Penalties or Fines

Because violations vary in threat to water quality, City inspectors may consider utilizing storm water field citations for infractions or misdemeanors. Similar to traffic violations, the penalty for a storm water infraction can be relatively minor for a first offense. Repeated violations could result in escalating fines or misdemeanor charges.

8. Declaration of a Public Nuisance

Whenever an existing condition or a discharge into the storm water conveyance system violates the City ordinance, it is considered a threat to public health, safety, and welfare and may be declared a public nuisance. The inspector may follow appropriate procedures to recommend a declaration of a Public Nuisance by City Council in order to abate the nuisance discharge or condition.

9. Civil and/or Criminal Court Actions

As a final resort, the City of Carlsbad may use civil and or criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant responsible parties.

Action #2 – Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

The City will develop an Enforcement Response Plan to outline procedures to identify, document, and respond to storm water violations. The plan will provide guidance for City inspectors in selecting initial and follow-up enforcement actions, identifying responsible staff, and specifying appropriate time frames for actions.

3.8 Non-compliant Site Identification and SDRWQCB Notification

3.8.1 Purpose and Permit Requirements

Purpose

The purpose of this section of the Industrial Component is to define the enforcement actions associated with non-compliance of the Permit, City Ordinance, or JURMP requirements.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Industrial Component for Non-Compliant Site Notification is as follows:

Section F.3.b.(8)
Each Copermittee shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under section R.1 (and B.6 of Attachment C) of this Order.

Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.

Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.

Jurisdictional URMP Requirements

The Permit requirement under the Industrial Component for Non-compliant Site Notification is as follows:

Section H.(3)(j)
A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites.

City Action Plan

1) Determine when an incident of non-compliance presents a threat to human or environmental health.

2) Establish procedures for notifying the SDRWQCB.

3.8.2 Non-compliance Notification Action Plan

<u>Action #1</u> – Determine when an incident of non-compliance presents a threat to human or environmental health.

An incident or practice of non-compliance that requires a hazardous materials emergency response will be considered a threat to human or environmental health that must be reported to the SDRWQCB according to the procedures listed in Action #2 below. The Environmental Programs Manager will use best professional judgment to notify the Industrial Compliance Unit of the SDRWQCB of any other non-compliance incidents that do not meet the above criteria but may be considered a threat to human or environmental health.

<u>Action #2</u> – Identify procedures for notifying the SDRWQCB.

The City will provide oral notification to the Industrial Compliance Unit of the SDRWQCB within 24 hours of the discovery of a non-compliant site meeting the aforementioned criteria. This will be followed by written notification within 5 days of the discovery.

Other instances of non-compliance will be submitted in the annual report to the SDRWQCB.